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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,490	02/03/2005	Andrew Edward Feiring	SR0017USPCT	3858

7590 09/27/2006

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Wilmington, DE 19898

EXAMINER
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HU, HENRY S

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/523,490

Applicant(s)

FEIRING ET AL.

Examiner

Henry S. Hu

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on IDS of May 19, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5-19-2005</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. It is noted that Applicants' IDS (2 pages) filed on May 19, 2005 was received. It is also noted that this US Application is from PCT/US03/26088 filed on August 19, 2003. **Claims 1-28 with three independent claims (Claim 1, Claim 13 and Claim 25) are now pending.**

An action follows.

### **DETAILED ACTION**

#### ***Election/Restrictions***

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1, this is based on the preliminary search done by the examiner as well as by examining the references cited in international search report and IDS filed by Applicants. It is noted that **all the three independent claims are marked with an underline and are combined with its dependent claims.**

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted as following:

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I. **Claims 1-12**, drawn to **a fluorine-containing copolymer** comprising: (a) at least one repeat unit derived from an ethylenically unsaturated compound having at least one fluorine atom covalently attached to an ethylenically unsaturated carbon atom; and (b) at least one repeat unit derived from an ethylenically unsaturated cyclic compound of structure with  $R^{1-12}$  and m as specified, classified in class 526, subclass 250.

II. **Claims 13-24**, drawn to **a photoresist composition comprising: (a) a fluorine-containing copolymer** comprising: (i) at least one repeat unit derived from an ethylenically unsaturated compound having at least one fluorine atom covalently attached to an ethylenically unsaturated carbon atom; and (ii) at least one repeat unit derived from an ethylenically unsaturated cyclic compound of structure with  $R^{1-12}$  and m as specified; **and (b) a photoactive component**, classified in class 430, subclass 270.1.

III. **Claims 25-27**, drawn to **a coated substrate comprising: (a) a substrate; and (b) a photoresist composition** comprising a fluorine-containing copolymer comprising: (i) a fluorine-containing copolymer comprising: (a') at least one repeat unit derived from an ethylenically unsaturated compound having at least one fluorine atom covalently attached to an ethylenically unsaturated carbon atom; and (b') at least one repeat unit derived from an ethylenically unsaturated cyclic compound of structure (I) with  $R^{1-12}$  and m as specified; and (ii) a photoactive component, classified in class 428, subclass 14.

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IV. **Claim 28**, drawn to **a process for coating a photoresist composition (of Group II) onto a substrate** so as to form a coated substrate (of Group III), classified in class 430, subclass 315.

3. Where the group of inventions is claimed in one and the same international application, the requirement for unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression “**special technical features**” shall mean those technical features that define a contribution which each of the claimed inventions considered as a whole, **makes over the prior art**. The inventions listed as Groups I, II, III, and IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, although they share the special technical feature, this special technical feature does not define a contribution over the prior art for the following reasons:

In view of international search report for **PCT/US2003/026088 (WO 2004/016664 A1)** and the references or articles cited in **IDS** filed by the Applicants on May 20, 2005, **Claims 1-28** is either obvious or anticipated by following: **US 5,229,473 to Kobo et al. and US 6,593,058 B1 to Feiring** (both cited as X or Y references), each individually or in combination. In summary, these four groups have no common features in the preparation as well as its application since they are structurally different. The scope of the claims, i.e., the metes and boundaries are distinct. Accordingly, the special technical feature linking the inventions, making fluorinated polycyclic polymers from Group I, Group II, Group III or Group IV does not

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provide a contribution over the prior art, and no single general inventive concept exists.

Therefore the restriction is appropriate.

4. With respect to the fact that “both groups are structurally different each other”, Group I was drawn to a fluorine-containing copolymer, Group II was drawn to a photoresist composition, Group III was drawn to a coated substrate, while Group IV was drawn to a process of coating a photoresist composition (of Group II) onto a substrate so as to form a coated substrate (of Group III). It is found that even the fluoropolymer (Group I) is indeed containing in each of Group II, Group III and Group IV as a major component; each group still has different scope, process of making and process of using.

5. Because these inventions are distinct for the reasons given above shown as different subject matters and the search required for each group is not required for other groups have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. It is noted that no phone call was made to **Konrad Kaeding (registration # 32,035, tel: 301 992-2093)** due to the complexity on multiple (three) independent claims. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

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7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

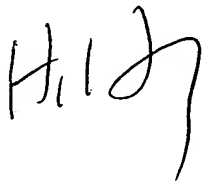
### ***Conclusion***

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications.

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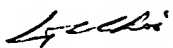
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

September 20, 2006

  
**LING-SUI CHOI**  
**PRIMARY EXAMINER**